

WHAT IS CLAIMED IS:

1. A method for minimizing call setup delay for a call in a communication network, wherein the communication network includes a central node connected to a number portability database, the method comprising:

- 5 triggering a first query to the central node for information for routing the call when a request for setting up the call is received by a switching unit;
triggering a second query from the central node to a home location register for the routing information in order to set up the call; and
triggering a third query from the central node to the number portability database for the routing
10 information if the second query fails to provide the routing information.

2. The method of claim 1 further comprising selecting the home location register from a first table accessible to the central node, wherein the home location register is selected based on a mobile station ISDN and a state of a flag.

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3. The method of claim 1 further comprising searching a second table for a location routing number before triggering the second query, wherein the second query is only triggered if the location routing number is not found in the second table.

- 20 4. The method of claim 1 wherein the home location register has a number portability mapping database for mapping ported numbers, wherein each mobile phone known to the home location register is identifiable by its mobile station ISDN number, and wherein triggering the second query includes searching number portability mapping database for a mobile station ISDN number associated with the call.

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5. The method of claim 1 wherein the call is made from one wireless communication network to another.

6. The method of claim 5 wherein the two wireless communication networks use different
30 technologies.

7. A method for minimizing call setup delay in a telecommunications network, wherein the network includes first and second tables, wherein the first table contains a plurality of identifiers and an associated location routing number (LRN) for each identifier, and the second table contains a plurality of
35 identifiers and an associated home location register (HLR) for each identifier, the method comprising:

determining whether an identifier associated with a mobile device is listed in the first table;
sending a query to a network node corresponding to the LRN associated with the identifier if the
identifier is listed in the first table;
determining whether the identifier is listed in the second table if the identifier is not listed in the first
5 table; and
sending a query to the HLR associated with the identifier if the identifier is listed in the second table.

8. The method of claim 7 further comprising sending a query to a number portability database if the
identifier is not listed in the second table.

10 9. The method of claim 8 further comprising:
if the number portability database does not recognize the identifier, generating an error message; and
if the number portability database does recognize the identifier, sending a query to a network entity
corresponding to an LRN identified by the number portability database.

15 10. The method of claim 9 further comprising, if the network entity recognizes the identifier,
inserting a new entry into the first table, wherein the new entry includes the identifier and the associated
LRN identified by the number portability database.

20 11. The method of claim 7 further comprising identifying the HLR associated with the identifier,
wherein the HLR is differentiated in the second table from another HLR by means of a flag.

12. The method of claim 11 further comprising, if the queried HLR indicates that the identifier is not
known, setting the flag to indicate that the HLR does not recognize the identifier.

25 13. The method of claim 12 further comprising:
sending a query to at least one other HLR; and
if the other HLR recognizes the identifier, setting a flag in the second table to indicate that the other HLR
recognizes the identifier.

30 14. The method of claim 11 further comprising, if the queried HLR indicates that the identifier is not
known, sending a query to a number portability database.

15. The method of claim 11 further comprising, if the queried HLR indicates that the identifier is
known, continuing with a predefined call setup procedure.

16. The method of claim 7 further comprising:

determining if the network node corresponding to the LRN recognizes the identifier;
deleting the identifier from the first table if the network node does not recognize the identifier; and
continuing with a predefined call setup procedure if the network node recognizes the identifier.

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17. The method of claim 16 further comprising, if the network node does not recognize the identifier,
determining whether the identifier is listed in the second table.

18. The method of claim 17 further comprising:

10 sending a query to the HLR associated with the identifier if the identifier is listed in the second table; and
sending a query to a number portability database if the identifier is not listed in the second table.

19. A telecommunications system adapted for minimizing call setup delay for a call associated with a
first mobile station identifier, the system comprising:

15 a plurality of home location registers (HLRs);

a central node in communication with the HLRs;

a first table accessible to the central node, wherein the first table contains a plurality of mobile station
identifiers and associated location routing numbers;

20 a second table accessible to the central node, wherein the second table contains a plurality of mobile
station identifiers, wherein each identifier is associated with one of the HLRs; and

instructions adapted for execution by the central node, the instructions including:

instructions for searching the first table for a second mobile station identifier that matches the
first mobile station identifier and sending a query to a network entity identified by the associated location
routing number if a match is found; and

25 instructions for searching the second table for a second mobile station identifier that matches the
first mobile station identifier and sending a query to the associated HLR if a match is found.

20. The telecommunications system of claim 19 further comprising a number portability database
(NPDB) connected to the central node, and instructions for querying the NPDB if no match is found after
30 searching of the first and second tables.

21. The telecommunications system of claim 19 further comprising a network switch in
communication with the central node, wherein the network switch is adapted for querying the central
node for routing information when the switch receives a request to set up the call.

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22. The telecommunications system of claim 19 wherein at least some of the plurality of HLRs are based on different technologies.

23. The telecommunications system of claim 19 wherein the instructions further include instructions
5 for receiving and sending messages based on different technologies.